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IN THE CLAIMS

1. (Currently amended) A device for detecting the temperature of an oscillator crystal that has a crystal vibrator in an oscillator-crystal housing, in particular in a mobile radio apparatus, wherein a temperature sensor is arranged on a carrier in such a way that it is subjected to the same ambient temperature as the oscillator crystal, or the crystal vibrator, wherein the temperature sensor is provided on the same side of the carrier as the oscillator crystal, or the crystal vibrator respectively, and is not separated from the oscillator crystal, or from the crystal vibrator, by a wall or by intervening circuit elements, and that the temperature sensor is electrically connected parallel to the terminals of the crystal vibrator or to a series connection of the crystal vibrator and at least one coupling capacitor, wherein a characteristic curve of the temperature sensor is stored in an evaluation circuit coupled to the temperature sensor.

2. (Previously presented) A device as claimed in claim 1, wherein the temperature sensor is arranged in the oscillator crystal housing.

3. (Previously presented) A device as claimed in claim 1, wherein the temperature sensor is arranged on a printed circuit board adjacent to the oscillator crystal housing.

4. (Previously presented) A device as claimed in claim 1, wherein the carrier exhibits openings between the heat-emitting circuit and the oscillator crystal .

5. (Currently amended) A device as claimed in claim 1, wherein the temperature sensor is ~~applied~~ coupled to a constant-current source or a constant-voltage source, and ~~an~~ the evaluation circuit which evaluates the temperature and/or the temperature gradient for compensation of the temperature-dependent resonant frequency of the oscillator crystal.

6. (Previously presented) A device as claimed in claim 1, wherein the resistance/temperature characteristic curve of the temperature sensor is stored in the evaluation circuit.

7. (Previously presented) A device as claimed in claim 5, wherein the evaluation circuit is equipped with a measurement path in which the constant-current source or constant-voltage source, the temperature sensor and an analog/digital converter to detect the voltage drop at the temperature sensor are provided, and with an oscillator path in which an oscillator circuit comprising the oscillator crystal with an amplifier and at least one capacitor are provided.

8. (Previously presented) A device as claimed in claim 7, wherein the measurement path and the oscillator path are separated from each other by filtering means.

9. (Previously presented) A device as claimed in claim 1, characterized by an oscillator circuit in which the oscillator crystal is located and the constant-current source or the constant-voltage source can be applied sequentially, one after the other, to the parallel connection of the oscillator crystal, comprising a serial coupling capacitor , and the

temperature sensor .

10. (Previously presented) A device as claimed in claim 5, wherein the capacitance value of at least one capacitor which forms an oscillator circuit with the oscillator crystal can be readjusted by means of the evaluation circuit as a function of the detected temperature or temperature gradient.

11. (Previously presented) A device as claimed in claim 5, wherein the dividing ratio of an adjustable divider of a phase-locked loop can be adjusted by means of the evaluation circuit as a function of the detected temperature or temperature gradient.